

[54] APPARATUS FOR ABLATING AND REMOVING CATARACT LENSES

[76] Inventor: Patricia E. Bath, 4554 Circle View Blvd., Los Angeles, Calif. 90024

[21] Appl. No.: 943,098

[22] Filed: Dec. 18, 1986

[51] Int. Cl.⁴ A61B 17/36

[52] U.S. Cl. 128/303.1; 128/397; 604/20; 604/35; 604/43

[58] Field of Search 128/303.1, 395, 397, 128/398; 604/22, 20, 35, 43

[56] References Cited

U.S. PATENT DOCUMENTS

3,460,538	8/1969	Armstrong	128/303.1
3,971,382	7/1976	Kransov	
3,982,541	9/1976	L'Esperance, Jr.	128/303.1
4,024,866	5/1977	Wallach	604/22
4,320,761	3/1982	Haddad	604/22
4,538,608	9/1985	L'Esperance, Jr.	128/395
4,580,559	4/1986	L'Esperance	
4,583,539	4/1986	Karlin et al.	128/395

OTHER PUBLICATIONS

"Heatless Laser Etching" by John Free; Popular Science 12/83.

Serial No. 702,569 filed 2-19-85 to Gruen et al.

Primary Examiner—Lee S. Cohen

Assistant Examiner—David Shay

Attorney, Agent, or Firm—Cushman, Darby & Cushman

[57] ABSTRACT

A method and apparatus for removing cataracts in which a flexible line preferably 1 mm or less in diameter is inserted through an incision into the anterior chamber until its end is adjacent the cataract. Coherent radiation, preferably at a frequency between 193 and 351 nm, is coupled to the cataract by an optical fiber in the line. An irrigation sleeve provided about the fiber and an aspiration sleeve extending partially around the irrigation sleeve conduct irrigating liquid to and remove ablated material from the anterior chamber and form with the optical fiber the flexible line.

7 Claims, 1 Drawing Sheet

